

VOLCANOES KILLING TREES IN NEW JERSEY



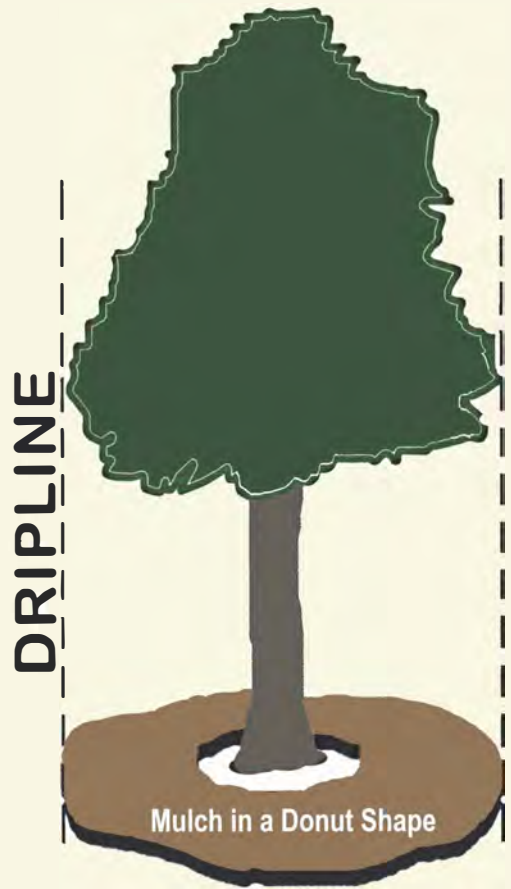
This is the **wrong way to use mulch around a tree.**

****Never** pile mulch against bark!**

Mulch volcanoes are **killing our trees!**

What do I need to know to mulch trees the right way?

- Start 6 inches from the tree trunk at ground level and mulch outward to the edge of the dripline to a maximum depth of 2 inches to 4 inches.
- Keep a 2-inch to 4-inch layer around, but not touching the base of the tree. Mulch as much of the area under a tree as possible without having mulch touch the trunk.
- Never pile-up a cone of mulch around the tree trunk! Mice, insects, and fungus may hide next to the trunk and feed on parts of the tree. The cone-shaped mulch piles and thick layers of mulch also prevent water from reaching a tree's roots. Tree roots that grow up into the cone of mulch on top of the soil cannot be healthy.
- One layer of woven Landscape Fabric may be used under mulch in heavy weed areas. Never use plastic sheets under the mulch. Plastic sheets block the passage of air and water and stunt root growth.
- Every spring or every other spring, rake or remove any hard crust and add only enough new mulch to maintain a 2-inch to 4-inch layer. Never build up layers of mulch by adding new mulch on top of the old mulch around a tree.



**2 INCHES TO 4 INCHES DEEP
START 6 INCHES FROM THE TRUNK**

Improper mulching kills trees! Mulch should never be piled up into a cone around a tree trunk. These *mulch volcanoes* are killing trees and are wasting money on excess mulch material. It is easy to remember . . .

VOLCANOES ARE BAD!

DONUTS ARE GOOD!

What do the experts say?

- Keep mulch away from tree trunks because bark will soften and become prone to insects, fungus, and rodents!
- Trees mulched in groups grow better than trees mulched alone.
- Put the mulch on the soil surface and do not mix it into the soil. Let mulch decay naturally into the soil at its own pace.
- Mulch helps young trees survive.
- For newly planted trees, mulch out to one foot beyond the root ball.
- For newly planted trees, enlarge the mulch circle a foot or two each year to allow for root growth.
- Mulch that is kept away from the trunk and at 2 to 4 inches thick lets the tree get ready for winter. Tree experts call this hardening off and it cannot happen with mulch that is deeply piled and is keeping a tree's roots too warm.
- For tall trees that have narrow driplines, mulch out 1-foot for each 1-inch of the tree trunk's diameter.

What about termites?

Mulch beds should be kept at least 6 inches away from building foundations, the lowest course of siding, and any wooden parts of a building. Termite kings and queens only live in soil, so chances of bringing them home in mulch are slim. However, that 6-inch barrier strip will not be easy for termites to bridge with their mud tubes.

What materials are the **BEST** mulches for trees?

Bark chunks or shredded bark that is at least 3/8 inch in size. Pine bark will last longer than hardwood bark.

Pine needles

One-year old wood chips

Leaves that were shredded and composted for at least three months

What materials are the **WORST** mulches for trees?

Fresh grass clippings or fresh wood chips

Any fresh organic mulch

Any organic mulch that smells bad

Peat moss or sawdust

Pebbles, rocks, or cobble stones

Bricks or pavement or black plastic

Ground-up rubber tires



Improper mulching *kills* trees!



These photos show proper mulching around trees in the winter and summer.



*These trees were planted **correctly**. Mulch was applied in a 2" to 4" layer on the soil. Mulch is not touching bark.*



What good does proper mulching do for trees?

- **Mulch helps** the soil to hold water for the tree's roots.
- **Mulch helps** to prevent soil compaction that suffocates a tree's roots.
- **Mulch helps** add organic matter to the soil as it gradually breaks down, thus acting like a slowly released, natural fertilizer for the tree.
- **Mulch helps** to prevent the soil from washing away. Soil erosion is very harmful to the tree's exposed roots. Soil erosion not only stresses the tree but can increase the chance of blowdown in a storm or on a windy day.
- **Mulch helps** to reduce the damage from drought and from pests.
- **Mulch helps** to keep lawn mowers and string trimmers away from the bark. Damaged bark is an open wound that can be infected by fungus and bacteria known to kill trees. If the tree's green tissues located just inside the bark are cut, then water from the roots cannot get carried up to the leaves and food from the leaves cannot get carried down to the roots.
- **Mulch helps** to moderate soil temperatures. It behaves like an insulating blanket. It helps to keep soil cooler in the summer and warmer in the winter. This is much less stressful for the tree's roots.
- **Mulch helps** to reduce weeds and grasses around trees. Weeds and grasses will compete with the tree's roots for water and for nutrients.

Who can help your trees?

If your tree is trapped in a mulch volcano, please don't remove the entire volcano all at once! Removal of a mulch volcano all at once might further damage your already stressed tree. We recommend that you first seek the advice of a NJ Certified Tree Expert. A free CTE Directory is available from the Forest Service office listed below or on the internet.

NOTES

Thanks to the Pennsylvania Urban and Community Forestry Council, the University of Delaware, and to the National Arbor Day Foundation for information used here.

The New Jersey Shade Tree Federation is a non-profit organization with offices on the campus of our Land Grant Institution: Cook College at Rutgers, the State University.

The New Jersey Community Forestry Program is a program of the New Jersey Forest Service, Division of Parks and Forestry in the Department of Environmental Protection.

The New Jersey Community Forestry Council is a legislatively created group that advises the New Jersey Forest Service on tree related issues.

The United States Department of Agriculture's Forest Service provides funds and leadership through a nationwide community forestry program.

FOR INFORMATION

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